



WES INFO BULLETIN

NATIONAL ACTIVITY TUNISIA

“TECHNICAL ASSISTANCE FOR INDUSTRIAL POLLUTION PREVENTION AND MONITORING FROM THE TOMATOES TRANSFORMATION INDUSTRY IN THE COASTAL AREA OF KORBA”

April 2023

Overview

From March 2020 to March 2022, the 'Water and Environment Support (WES) in the ENI Southern Neighborhood region' Project provided technical assistance for industrial pollution prevention and monitoring from the tomatoes transformation industry in the coastal area of Korba in Tunisia.

The tomato processing industry holds a significant position in both the agricultural and food sectors of Tunisia. In fact, the country is among the top 10 producers of tomato paste in the world. With a cultivation area of 16.500 ha, more than 10.000 producers participate in seasonal (40 days/year) industrial tomato processing. In 2020, the country recorded a production of 1,2 million tons. In the Korba and Dar Allouche areas in the Governorate of Nabeul there are 18 units of tomato processing, of which only 13 are operational with a combined capacity of 13.400 tons/day. The production process requires a substantial amount of water, with each unit consuming between 1,4 to 2 m³ of water per ton of processed tomato.

However, the Korba and Dar Allouche regions are also home to a vulnerable coastal ecosystem, with the Korba Lagoon serving as a habitat for various water birds. This area is designated as a Ramsar site and an Important Bird Area. Unfortunately, agriculture is overusing the region's water resources, leading to significant water stress and the advancement of a salinisation front of marine waters in its aquifers. Additionally, the tomato processing industry is contributing to environmental degradation by discharging approximately 16.500 m³/day of inadequately treated industrial water, as well as untreated sanitary wastewater and solid waste. Inspections by the National Environment Protection Agency (ANPE) have revealed that almost all treatment plants in the tomato processing factories are not functioning properly, leading sometimes to non-compliance with national standards.

The cumulative effect of these issues poses a significant threat to the ecological balance of coastal lagoons, the natural ecosystem, and the well-being of the human population in the area. Without intervention, irreversible environmental damage could occur. To mitigate the risks, **Tunisia requested assistance from the WES project to provide sustainable solutions and develop an environmental monitoring program dedicated to the lagoon. The program prioritise the sustainable water resource management and the control of wastewater discharge from tomato processing units.**

Methodology and Implementation

The main tasks and results achieved under the activity are summarised as follows:

- **Task 1: Inception phase and diagnosis of practices related to the cultivation, transport and industrial processing of tomatoes as well as effluent treatment technologies, collecting all the necessary information and studies carried out in the region.**
The practices related to the cultivation and processing of tomatoes in seven tomato industrial units were diagnosed, and their effluent treatment solutions and technical processes options were analysed and evaluated.
- **Task 2: Presentation of a proposal of optimisation and improvement measures from an ecological efficiency and resource use perspective.**
Based on the results of task 1, a report was prepared that outlines various optimisation and improvement measures related to the cultivation, transport, and industrial processing of tomatoes,

as well as the treatment of effluents in the sector. These measures were discussed with ANPE and include best practices in the industry. The report highlights mitigation and improvement measures to be taken to address the issues identified in task

- **Task 3: Supporting ANPE for the establishment of an environmental monitoring system for the tomato processing industry.**
WES experts reviewed the role of each department within ANPE and identified existing shortcomings in the current monitoring procedure. A set of operational and institutional recommendations were discussed with ANPE departments and formulated into an internal report, which was subsequently submitted to ANPE.
- **Task 4: Stakeholders mobilisation and launch of the process of adopting a sectoral framework agreement for the sustainable management of resources and the protection of the environment of the tomato processing activity.**
A main result emerging from the discussions during the third and last Steering Committee Meeting held on the 31st of May 2022, was the establishment of a sectoral agreement by setting its various sections, as well as the key elements to be included in each one.
- **Task 5: Preparation of a funding request for an integrated pollution control and environmental monitoring project related to the tomato processing industry in the target region.**
A "request for funding" was prepared by WES for an integrated pollution control and environmental monitoring project related to the tomato processing industry in the target region.
The project proposal consists of four components: 1) Strengthening sustainable practices; 2) Greening of tomato industries; 3) Depollution of the Korba lagoon and wadis; and 4) Accompanying measures.

Main Outcomes

- ✓ Tunisia adopted at the end of 2022 a strategy that promotes industrial development and innovation, while considering environmental protection and sustainability aspects. One of the main pillars of this strategy is to mitigate pollution from industrial effluents, including those from tomato factories. This WES activity has contributed to Tunisia's efforts in implementing this strategy by reinforcing and enabling effective pollution control, particularly related to pollution generated by the food industry.
- ✓ The implementation of this activity, with its various tasks, has raised awareness among different industries in the area, leading to improved environmental management of water resources. It has also supported ANPE in enhancing environmental monitoring of the industrial sector, as the agency has taken note of the proposals and committed to implementing the monitoring measures suggested by the WES Non-Key experts. Moreover, the sector's stakeholders, particularly representatives of the Ministry of Industry and industrialists, are more aware of the issue and mobilised to implement solutions. Stakeholders, including Non-Government Organisations, now recognise that addressing challenges related to this sector requires taking a comprehensive approach, from cultivation to processing. As a result, solutions to reduce the amount of soil collected with the tomatoes during cultivation, harvesting and transportation have been proposed.

- ✓ There are several future actions that need to be taken by the Tunisian partners, particularly the Ministry of Environment, now that the activity is completed, including to:
Disseminate the proposed solutions and provide support for implementing the measures recommended for optimising and improving techniques used in the cultivation, transport, and industrial processing of tomatoes, as well as for effluent treatment.
- ✓ Consolidate and replicate the results of the WES activity to other industries in the region.
- ✓ Approach potential donors to secure funding for the various components and activities outlined in the report on the funding request for an integrated depollution and environmental monitoring project linked to the tomato processing industry in the Korba and Dar Allouche region.



Useful Link

https://www.wes-med.eu/activities_type/n-e-tn-2-technical-assistance-for-industrial-pollution-prevention-and-monitoring-from-the-tomatoes-transformation-industry-in-the-coastal-area-of-korba/

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WES Project

The EU funded Water and Environment Support (WES) is a regional project designed to contribute to the implementation of an integrated approach to pollution reduction and prevention, in line with the Union for the Mediterranean agendas and the Barcelona Convention. WES is also meant to contribute to a more efficient management of scarce water resources in the ENI Southern Neighbourhood region.

The project aims to do so by increasing the capacity of stakeholders that are involved in pollution reduction and water management and support them in formulating and implementing the environmental and water policies.

WES supports the shift to a more sustainable consumption and production model, promotes an integrated and efficient management of water, combats plastic pollution and marine litter and fosters dialogue on key environmental and sustainable development issues. In this way, WES also supports mutual understanding, cooperation, and peace in the region.

The WES Partner Countries are Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine, and Tunisia. However, to ensure the coherence and effectiveness of EU funding or to promote regional cooperation, the eligibility of specific actions can be extended to neighbouring countries in the Southern Neighbourhood region.

For any further information on WES project, please visit: www.wes-med.eu

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